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10/828,672	04/21/2004	Yoshihiro Nonogaki	CU-3695 RJS	4481
26530 7590 06/26/2008 LADAS & PARRY LLP 224 SOUTH MICHIGAN AVENUE SUITE 1600 CHICAGO, IL 60604				
EXAMINER				
OCHOA, JUAN CARLOS				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/828,672

**Applicant(s)**

NONOGAKI ET AL.

**Examiner**

JUAN C. OCHOA

**Art Unit**

2123

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-9 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/CI/100)  
Paper No(s)/Mail Date 21 April 2004, 12/2/04  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

1. Claims 1–9, originally filed on 4/21/2004, are currently pending. The application claims benefit of 2003-125466 Japanese application, filed 04/30/2003.

### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed on 4/21/2004.

### ***Drawings***

3. The drawings are objected to because of the following informalities:
4. As to Figure 1, logic box 10 includes the misspelled term "database".
5. As to Figure 6, table's tile is misspelled as "intervala".
6. Appropriate correction is required.

### ***Claim Objections***

7. Claim 3 uses the acronym or variable "QSAR", the first use of an acronym or variable in a claim should be defined to avoid any possible indefiniteness issues.
8. Claim 6 uses the acronym or variable "FF" in lines 4 and 5, the first use of an acronym or variable in a claim should be defined to avoid any possible indefiniteness issues.
9. Claim 8 claims "a computer-readable storage medium for storing the computer-executable program". A description of a "computer-readable storage medium" is non-existent in the application description, and this may raise indefiniteness or 101 issues.
10. Appropriate correction is required.

11. No new matter may be introduced in the required correction.

***Claim Rejections - 35 USC § 101***

12. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
14. As to claim 1, the method for predicting a paint film mottling value does not produce any useful, concrete and tangible result. Merely acquiring glitter and color of the paint film from the blending information does not predict any paint film mottling. As a matter of fact, glitter, representing brightness, and color are inputs to the paint film mottling prediction formula (see claim preamble).
15. As to claim 2, the claim does not produce a tangible result. Merely generating a calculation formula is not sufficient to constitute a tangible result.
16. As to claim 7, it claims "a computer-executable program", which fails to fall into one of the categories of invention.
17. As to claim 7, the method for predicting a paint film mottling value does not produce any useful, concrete and tangible result. Merely acquiring glitter and color of the paint film from the blending information does not predict any paint film mottling. As a matter of fact, glitter, representing brightness, and color are inputs to the paint film mottling prediction formula (see claim 1 preamble).

Art Unit: 2123

18. As to claim 8, the method for predicting a paint film mottling value does not produce any useful, concrete and tangible result. Merely acquiring glitter and color of the paint film from the blending information does not predict any paint film mottling. As a matter of fact, glitter, representing brightness, and color are inputs to the paint film mottling prediction formula (see claim 1 preamble).

19. As to claim 9, claim recites software limitations and therefore the claim is directed to software per se, which is considered non-statutory subject matter.

20. As to claim 9, the claim states that is to an apparatus, but it appears to also claim a method, the method for predicting a paint film mottling value does not produce any useful, concrete, and tangible result. Merely acquiring glitter and color of the paint film from the blending information does not predict any paint film mottling. As a matter of fact, glitter, representing brightness, and color are inputs to the paint film mottling prediction formula (see claim preamble).

21. Dependent claims inherit the defect of the claim from which they depend.

### ***Claim Rejections - 35 USC § 112***

22. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

23. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in

Art Unit: 2123

the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 8 refers to the term computer readable storage "medium". A description of a "medium" is non-existent in the application description.

24. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

25. Claims 1, 3–5, and 7–9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

26. Claims 1 and 9, as written, fail to perform the method set forth in their preambles, more specifically "paint film mottling prediction". In the body of the claim, paint film mottling is not predicted.

27. Claim 8 refers to the term computer readable storage "medium". It is not clear what Applicant refers to by "medium", since a description of a "medium" is non-existent in the application description.

28. Dependent claims inherit the defect of the claim from which they depend.

### ***Double Patenting***

29. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

Art Unit: 2123

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

30. Claims 2 and 6 are rejected on the ground of nonstatutory obviousness-type

double patenting as being unpatentable over claims 1 and 5 of U.S. Patent No.

7,283,239, ('239 hereinafter). Although the conflicting claims are not identical, they are not patentably distinct from each other because the difference between claims 2 and 6 in the instant application and claims 1 and 5 in '239 is: claim 1 in '239 has as a last step: "an evaluation step for numerically evaluating mottling of other paint film using the generated mottling value calculation formula, and an output step for outputting a result of the evaluation step to a user". Evaluating mottling using the generated formula is an inherent step in the paint film mottling prediction process. Examiner notes that claim 2 is presently rejected under 101, because it merely generates a calculation formula and does nothing with it.

### ***Claim Rejections - 35 USC § 102***

31. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

32. Claims 1, 3–5, and 7–9 are rejected under 35 U.S.C. 102(b) as being anticipated by Dumont-Becle et al., (Dumont-Becle hereinafter), Multi-Texturing Approach for Paint Appearance Simulation on Virtual Vehicles.

33. As to claim 1, Dumont-Becle discloses a paint film mottling prediction method wherein a glitter representing value expressing properties of a brightness image of a paint film and color values of the paint film are substituted into a paint film mottling prediction formula (see page 3, 3rd paragraph), the method comprising: a blending information acquisition step for acquiring blending information from paint film information of the paint film with reference to a blending information database that stores the blending information (see page 4, 2nd paragraph), and a paint film information acquisition step for acquiring the glitter representing value and the color values of the paint film from the blending information with reference to a paint film mottling forecast database that stores the glitter representing value and the color values (see “mottle” as “spot” in page 6, 1st paragraph).

34. As to claim 3, Dumont-Becle discloses a paint film mottling prediction method as claimed in claim 1, wherein the paint film mottling prediction formula is generated using QSAR analysis (see page 7, Section 2.3).

35. Claim 3 has been given a broad reasonable interpretation by the Examiner. The Examiner notes that the step disclosed in (page 7, Section 2.3) is functionally equivalent to the results produced by the step expressly claimed in Applicant's dependent claim 3. Therefore, the “product” that is produced by performing the step disclosed in dependent



claim 3 is the same as the "product" that is produced in (page 7, Section 2.3). Although the "step" by which the end result is different, the final result for the "step" is identical.

36. As to claim 4, Dumont-Becle discloses a paint film mottling prediction method as claimed in claim 1, wherein the glitter representing value is a sum of gray-scale gradation step values of the brightness image to which a spatial-frequency differential process is applied (see "gray-scale" as "gray layer" in page 2, 2nd paragraph).

37. As to claim 5, Dumont-Becle discloses a paint film mottling prediction method as claimed in claim 4, wherein the spatial-frequency differential process is one of a Sobel filter, a Roberts filter, and a Laplacian filter (see page 3, Section 1.2, 1st paragraph).

38. Claim 5 has been given a broad reasonable interpretation by the Examiner. The Examiner notes that the step disclosed in (page 3, Section 1.2, 1st paragraph) is functionally equivalent to the results produced by the step expressly claimed in Applicant's dependent claim 5. Therefore, the "product" that is produced by performing the step disclosed in dependent claim 5 is the same as the "product" that is produced in (page 3, Section 1.2, 1st paragraph). Although the "step" by which the end result is different, the final result for the "step" is identical.

39. As to claim 7, Dumont-Becle discloses a computer-executable program for executing the paint film mottling prediction method as claimed in claim 1 (see page 7, Section 2.3).

40. As to claim 8, Dumont-Becle discloses a computer-readable storage medium for storing the computer-executable program as claimed in claim 7 (see page 7, Section 2.3).

41. As to claim 9, Dumont-Becle discloses a paint film mottling prediction apparatus for predicting paint film mottling by substituting a glitter representing value expressing properties of a brightness image of a paint film and color values of the paint film into a paint film mottling prediction formula (see page 3, 3rd paragraph), the apparatus comprising: a blending information database for storing blending information (see page 4, 2nd paragraph), a paint film mottling forecast database for storing the glitter representing value and the color values (see "mottle" as "spot" in page 6, 1st paragraph), blending information acquisition means for acquiring the blending information from paint film information of the paint film with reference to the blending information database (see page 4, 2nd paragraph), and paint film information acquisition means for acquiring the glitter representing value and the color values of the paint film from the blending information with reference to the paint film mottling forecast database (see "mottle" as "spot" in page 6, 1st paragraph).

### ***Conclusion***

42. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

43. Gaafar and Aldowaisan, Fitting A Mixture-Based Response Surface Using Computer Simulation teaches "a second-order model was fitted to the data using DESIGN-EXPERT (Stat-Ease 1992), a statistical package for fitting response surfaces" (see page 1426, col. 1, 1st paragraph) and "An augmented simplex-lattice mixture design was utilized to fit a mathematical model between ingredients of a product mix and average WIP" (see page 1427, col. 1, last paragraph).

Art Unit: 2123

44. Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan C. Ochoa whose telephone number is (571) 272-2625. The examiner can normally be reached on 7:30AM - 4:00 PM.

46. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

47. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JO 6/14/08

/Zoila E. Cabrera/  
Primary Examiner, Art Unit 2123